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ABSTRACT

In order to discover whether the nonverbal responses to literature of primary grade children--in the form of drawings--provide significant information about their feelings toward literature, this study measured primary children's responses to "The Giving Tree." Ninety children in four grade levels (kindergarten through third grade) listened to the story as it was read to them and then chose three crayons from a total of eight colors to draw whatever came to mind in a five-minute period. A content analysis of drawings indicated colors and settings students "borrowed" from the book and those students used independently. Results showed that children's drawings do give an insight into children's reactions to literature and that age made a difference in children's responses, with younger children responding more to the tree and older children interpreting the story as an account of people's inhumanity toward themselves. (Tables of findings are included.) (JM)

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# Nonverbal Responses of Primary School Students to The Giving Tree

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## Background and Review

It might be argued that the forum for teaching literature has moved from the field of literary criticism to that of educational psychology. Until recently, pedagogical dicta, commercially prepared textbooks, and teachers' manuals have tended to prescribe criteria for "true" appreciation of literature. One textbook series of my acquaintance directed the teacher not only to ask specific questions of students but also to receive specific answers. That literary appreciation depended upon detecting the inherent values of a work was, within the last decade, challenged in theory at the Dartmouth Conference (Dixon, 1967) and in practice (Moffett, 1968). The belief that teachers should listen to what children voluntarily say about a work rather than tell children what they should say, had, in addition, a body of supportive

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research, even prior to Dartmouth. Purves and Beach (1972) indicate that studies of response to literature, dating back to 1929 (the bibliography of such studies includes 246 titles) had tended to establish categories for classifying responses. More recently Cooper and Purves (1973) and Purves (1974), and Richard Lid and Philip Handler (1974), have attempted to popularize the notion that voluntary affective as well as cognitive responses to literature can be described and evaluated in the everyday classroom setting. So what was a "sense of rightness" at Dartmouth has continued to become scientifically quantifiable.

A favored means of evaluating student response to literature is content analysis. No recent addition to research methodology in education, it has attracted critics. Prior to the 1940's content analysis was, more often than not, a frequency count of certain characteristics within a literary or rhetorical work. Even today one can read studies that tabulate the frequency of negative references within a text to women or ethnic groups. After the 1940's uses of content analysis, became more complex, more subtle, as investigators sought to dissect war propaganda (Good, 1963). For instance consider the complexity of this politically inspired experimental problem:

> To determine whether increasing attention to and approval of the symbols of democracy in a given mass medium (i.e., of a neutral country) varies directly or inversely with that country's attention to and/or approval of the United States; with that country's attention to and/or approval of the Soviet Union. (Pool, 1970)

In effect, efforts are strong to improve the techniques of content analysis in light of criticism from certain research specialists. (Barcus, 1967).

## The Problem

Content analysis has been effectively used in describing the verbal responses of older children and adolescents (Loban, 1954; Squire, 1956; Purves and Rippere, 1968). But what about young children in the primary grades who lack the fluency of their older brothers and sisters? Might their nonverbal responses, for example, drawings, provide significant information about their feelings about literature?

## The Procedure

With this problem in mind, I decided to measure the nonverbal responses of primary school children to the book The Giving Tree. The Giving Tree, by Shel Silverstein (New York: Harper & Row, 1964), is a parable of the relationship between a boy and a tree. While the boy is young, he derives simple pleasures from the tree, for example, playing in and around the tree, eating the tree's apples, gathering the tree's leaves. As the boy grows older he demands more and more from the tree until, in order to escape life, the "boy" fells the tree to make a boat, only to return as a very old man to rest on the tree's stump. This deceptively simple story, poses some interesting problems for the classroom teacher:

1. Do all primary school children respond to the story in the same way?
2. Do all children understand the underlying sadness of the story?
3. Do children empathize with the tree, with the boy, or both?

Four graduate students, who had studied the transactive response theory (e.g., Cooper and Purves, 1973; Purves, 1974; Lid, 1974) assisted in this project. The students numbered 90 and, by four grade level classes, were distributed in the following way.

Table 1. Distribution by Grade Level

| Grade | N |
|---|---|
| K | 15 |
| 1 | 10 |
| 2 | 28 |
| 3 | 37 |
| | 90 |

Each student investigator was assigned a classroom. After a get-acquainted session, the investigator read the book The Giving Tree aloud to the class at large, showing pictures intermittently during narrative pauses at the end of each double page. On the students' desks were a blank sheet of paper and eight crayons (red, orange, yellow, green, blue, purple, black, brown). At the conclusion of the story, each student was asked to select 3 crayons and draw whatever came to mind during a five-minute period. After five minutes, work was halted and the pictures were collected.

All of the book's illustrations were in black and white, with the exception of the front cover which was red and green with black outline. The pictures in the book contain tree settings (leaves, branches,

apples) and boy settings (clothing, an ax, suitcase). A content analysis of student drawings might indicate

1. What colors students "borrowed" from the cover.
2. What colors students used independently.
3. What settings students "borrowed" from the book's illustrations.
4. What settings students "borrowed" from the text.
5. What settings students used independently.

## Results

Two types of analyses, then, seemed appropriate: the selection of colors and the nature of the drawings themselves.

### The Selection of Colors

In examining the drawings, the investigator realized that some children used less than or more than 3 colors. These papers were eliminated (see Table 2).

Table 2. Distribution by Grade Level After Deselection

| Grade Level | N |
|---|---|
| K | 9 |
| 1 | 9 |
| 2 | 19 |
| 3 | 37 |
| | 74 |

With the 74 remaining children the total incidences of color would be 3 x 74 or 222. Table 3 shows the distribution of uses of color for the 74 children.

Table 3. Distribution of Incidences of Color

| Color | # Incidences | % of Incidences |
|---|---|---|
| * green | 65 | .29 |
| brown | 57 | .25 |
| * red | 48 | .22 |
| blue | 20 | .09 |
| yellow | 11 | .05 |
| purple | 10 | .05 |
| * black | 8 | .04 |
| orange | 3 | .01 |
| | 222 | 1.00 |

* Colors evident in the illustrations of The Giving Tree.

Table 4 shows the distribution of incidences by grade level in terms of percentages; in light of unequal N.

Table 4. Distribution of Color Incidences

by Grade Level in Terms of Percentages

| Color | Grade Level | | | | |
|---|---|---|---|---|---|
| | K N = 9 | 1 N = 9 | 2 N = 19 | 3 N = 37 | K - 3 N = 74 |
| * green | .33 | .33 | .32 | .25 | .29 |
| brown | .14 | .29 | .30 | .25 | .25 |
| * red | .30 | .29 | .19 | .19 | .22 |
| blue | .11 | .04 | .05 | .12 | .09 |
| yellow | .00 | .00 | .07 | .06 | .05 |
| purple | .11 | .04 | .02 | .05 | .05 |
| * black | .00 | .00 | .04 | .05 | .04 |
| orange | .00 | .00 | .02 | .03 | .01 |
| | .99 | 1.00 | 1.01 | 1.00 | 1.00 |

* Colors evident in the illustrations of The Giving Tree.

In addition to determining the frequency of individual colors, the investigators noted the frequency of 3-color patterns. Table 5 presents that data.

Table 5. Frequency of 3-Color Patterns

| Pattern | # of Incidences | % of Incidences |
|---|---|---|
| G R Br | 33 | .44 |
| G R Y | 2 | .03 |
| G R Bl | 5 | .07 |
| G R P | 2 | .03 |
| G Br Y | 6 | .08 |
| G Br Bl | 6 | .07 |
| G Br P | 2 | .03 |
| G Br Bk | 3 | .04 |
| G Y Bl | 1 | .01 |
| G Y Bk | 1 | .01 |
| G Bl P | 2 | .03 |
| G Bl Bk | 2 | .03 |
| Y O P | 1 | .01 |
| Br Bl P | 1 | .01 |
| Br Bl Bk | 1 | .01 |
| R Br P | 1 | .01 |
| R Br Bl | 2 | .03 |
| R Br O | 1 | .01 |
| R Br Bk | 1 | .01 |
| R O P | 1 | .01 |
| | 74 | .97 |

Table 6 presents the data of Table 5 organized by grade level.

Table 6. Frequency of 3-Color Combinations/Grade Level, in Terms of Percentages

| Color Pattern | Grade Level | | | | |
|---|---|---|---|---|---|
| | K N = 9 | 1 N = 9 | 2 N = 19 | 3 N = 37 | N = 74 |
| G R Br | .44 | .89 | .53 | .30 | .44 |
| G R Y | .00 | .00 | .05 | .03 | .03 |
| G R Bl | .22 | .00 | .00 | .08 | .07 |
| G R P | .22 | .00 | .00 | .00 | .03 |
| G Br Y | .00 | .00 | .11 | .11 | .08 |
| G Br Bl | .00 | .00 | .16 | .08 | .07 |
| G Br P | .00 | .00 | .00 | .05 | .03 |
| G Br Bk | .00 | .00 | .11 | .03 | .04 |
| G Y Bl | .00 | .00 | .00 | .00 | .01 |
| G Y Bk | .00 | .00 | .00 | .03 | .01 |
| G Bl P | .11 | .11 | .00 | .00 | .03 |
| G Bl Bk | .00 | .00 | .00 | .05 | .03 |
| Y O P | .00 | .00 | .05 | .00 | .01 |
| Br Bl P | .00 | .00 | .00 | .03 | .01 |
| Br Bl Bk | .00 | .00 | .00 | .03 | .01 |
| R Br P | .00 | .00 | .00 | .03 | .01 |
| R Br Bl | .00 | .00 | .00 | .05 | .03 |
| R Br O | .00 | .00 | .00 | .03 | .01 |
| R Br Bk | .00 | .00 | .00 | .03 | .01 |
| R O P | .00 | .00 | .00 | .03 | .01 |
| N Patterns Used | 4 | 2 | 6 | 16 | 20 |

After examining the data on color frequency, the investigators realized not only that green, brown and red were the most frequently used colors but they also comprised the most popular 3-color pattern. The dominance of red and green, "borrowed" from the cover, was shared by an "independent" use of brown. Black, the third color evident in the text, was infrequently used, and no child in the study submitted a drawing with a green-red-black pattern. Children tended to reject the "green trunk" of the cover and used brown. Investigators felt they needed more information on how the three most popular colors--green-brown-red--were used.

Table 7 presents the data on the 33 children who used a green-brown-red color pattern.

Table 7. The Uses of Green-Brown-Red Color Patterns in 33 Children's Drawings

| | | Frequency (*Items appear in color in text) | | | | |
|---|---|---|---|---|---|---|
| | | K | 1 | 2 | 3 | K-3 |
| Color | Object | N4 | N8 | N10 | N11 | N33 |
| *red | *apples | 4 | 7 | 10 | 7 | 28 |
| | carved heart | 0 | 2 | 3 | 3 | 8 |
| | branches | 1 | 1 | 0 | 0 | 2 |
| | *clothing | 0 | 1 | 2 | 4 | 5 |
| | sun | 0 | 1 | 1 | 3 | 1 |
| | ground | 0 | 1 | 0 | 0 | 1 |
| | sky | 0 | 0 | 1 | 1 | 2 |
| | flower | 0 | 0 | 0 | 2 | 2 |
| | mouth | 0 | 0 | 0 | 2 | 2 |
| | outboard motor | 0 | 0 | 0 | 1 | 1 |
| | tears | 0 | 0 | 0 | 1 | 1 |
| | instances of red | 5 | 13 | 17 | 24 | 59 |
| | uses of red | 2 | 6 | 5 | 9 | 11 |
| *green | *tree top | 3 | 8 | 10 | 9 | 30 |
| | *ground | 2 | 3 | 5 | 6 | 16 |
| | *branches | 1 | 0 | 2 | 3 | 6 |
| | stem | 0 | 0 | 2 | 3 | 5 |
| | *leaves | 0 | 0 | 0 | 3 | 3 |
| | figure | 0 | 1 | 0 | 1 | 2 |
| | *clothing | 0 | 1 | 0 | 3 | 4 |
| | hair | 0 | 0 | 0 | 1 | 1 |
| | eyes | 0 | 0 | 0 | 1 | 1 |
| | sun | 0 | 0 | 0 | 1 | 1 |
| | water | 0 | 0 | 0 | 1 | 1 |
| | instances of green | 6 | 13 | 19 | 32 | 70 |
| | uses of green | 3 | 4 | 4 | 11 | 11 |
| brown | trunk | 4 | 8 | 10 | 9 | 31 |
| | branch | 1 | 2 | 3 | 3 | 9 |
| | stump | 0 | 2 | 0 | 2 | 4 |
| | figure | 1 | 3 | 2 | 5 | 11 |
| | clothing | 0 | 0 | 1 | 0 | 1 |
| | ground | 1 | 0 | 0 | 1 | 2 |
| | rock | 0 | 0 | 1 | 0 | 1 |
| | hole | 0 | 1 | 0 | 2 | 3 |
| | roots | 1 | 0 | 0 | 0 | 1 |
| | boat | 0 | 0 | 0 | 2 | 2 |
| | house | 0 | 0 | 0 | 1 | 1 |
| | sun | 0 | 0 | 1 | 0 | 1 |
| | chair | 0 | 0 | 0 | 1 | 1 |
| | instances of brown | 8 | 16 | 18 | 26 | 68 |
| | uses of brown | 5 | 5 | 6 | 9 | 13 |

Table 7 indicates that although tree-top - trunk - apple was the most popular use of green-brown-red, there were many other uses, some tree-related, some not. Notice the range of uses for colors among the grade levels:

Table 8. Range of Color Uses by Grade Level

| | -from- K | -to- 3 |
|---|---|---|
| Green | 3 | 11 |
| Brown | 5 | 13 |
| Red | 2 | 11 |

Table 9 compares uses of tree-related color to non-tree related color including the number of incidences of each.

Table 9. Tree-Related/Non-tree-Related Uses of Color (# of Instances of Each Use)

| | Tree | Non-tree |
|---|---|---|
| Green | 5 (48) | 6 (22) |
| Brown | 5 (48) | 7 (20) |
| Red | 5 (41) | 6 (17) |

In examining the data in Tables 7 - 9, the following tentative generalization might be offered:

> Those children who selected green, brown, and red tended to draw tree tops, tree trunks and apples, and although there was a higher number of non-tree-related uses of color, the number of instances of tree-related uses of color more than doubled that of non-tree related uses.

Three general areas tended to be developed in addition to the tree: the ground, the sky, and human figures. Ground areas tended to be colored realistically: green grass, brown dirt hills, brown rocks. Occasionally red flowers with green leaves and stems would be scattered on the ground. Sky areas, because of the green-brown-red pattern, tended to look bizarre--red suns, green suns, brown suns, and in one case, a blood-red sky. Figures tended to be brown, but if clad, they wore red and green shirts and pants.

What the data in Tables 7 - 9 suggests is that the "tree" determined the color choice that these 33 students made. Whereas, students drew non-tree related items, these tended to be colored with less realism. This might suggest that these students responded with sympathy more to the tree than to the figure. Additional support for this assumption might be found in the drawings of children not using the g-b-r pattern. When yellows, oranges, blues, blacks, and purples were used, individually or together, the tree was either not in the picture or played a less dramatic part. Here are several examples:

1. Orange-red-green flowers in the foreground, dwarfing an orange-red-green tree in the background.
2. Red-black-brown figure taking an ax to a tree stump from which sprung a flag.
3. Red-orange-brown figure chopping down a brown tree trunk next to a brown and red figure sitting in a brown and orange boat.
4. A yellow sun with black facial markings smiles down at a black tree stump and a green and black tree.

In response to the first two questions generated at the outset of this study:

1. What colors did students "borrow" from the cover? Students tended to borrow heavily from green and red but not black. In addition children's uses of green and red far exceeded those uses in the text.
2. What colors did the students use independently? Students tended to use brown more than any other independent color; blue, purple, and yellow tended to be used more than black and orange.

The answers to questions 1 and 2 suggest two tentative hypotheses:

a. Children tend, in their own pictures, to be influenced by the realistic use of color and reject the unrealistic use of color in the textual illustrations.

b. Children's selection of color is determined by which element in the story is most important to them. Children who select green-brown-red value the tree higher and color it realistically. Children who select yellow, orange, blue, and purple value the boy higher.

In conclusion, by selecting and using three crayons from eight, a student is responding nonverbally to a piece of literature. The items the student colors and the degree of realism with which he draws them can give researcher and teacher an insight to what the child values in the story.

Complexity of Drawings

In addition to observing the selection of color, the researchers attempted to analyze the drawings for complexity of content. From the 90, a sample of 57 were drawn (non-objective drawings were not considered and the third grade sample was reduced to conform with that of grades K - 2). The distribution for this part of the study is shown in Table 10.

Table 10. Distribution of Children by Grade Level for Complexity of Content

| Grade Level | N |
|---|---|
| K | 15 |
| 1 | 10 |
| 2 | 17 |
| 3 | 15 |
| | 57 |

Step 1. Listing Elements

As any primary school teacher knows, children's drawings are difficult to decipher, let alone interpret. After examining each picture scores of times, the investigators compiled a list of objects, and proceeded to do a frequency distribution. However, gnarly problems occurred. For example, in tabulating apples, some apples were in the tree, some were on the ground, some falling: were all of these apples equal in value? Again, was a stick figure the same value as a clothed male-child with a baseball cap? Some classification system had to be devised.

Step 2. Classification System

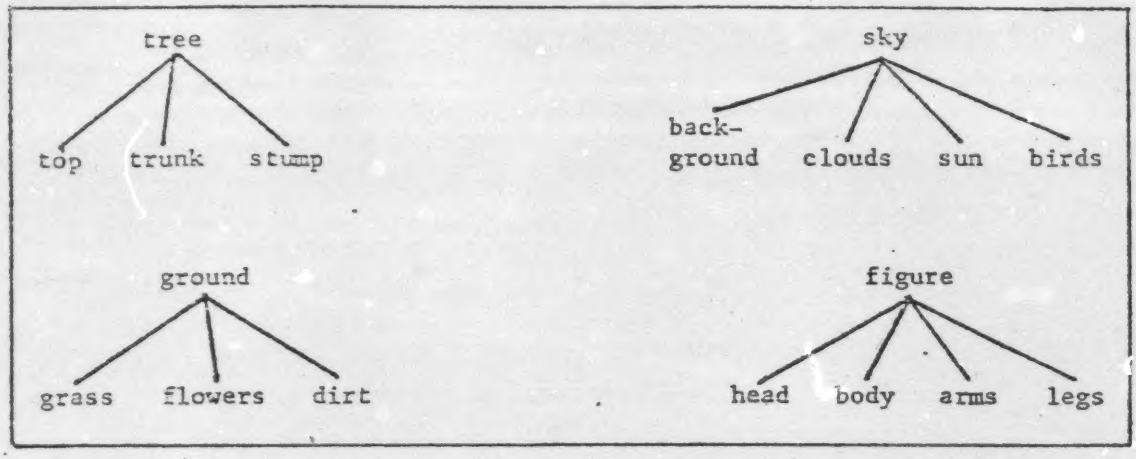
In examining the pictures repeatedly, investigators discovered that four general areas emerged, those referred to in the previous part of this study:

Table 11.

| |
|---|
| tree |
| sky |
| ground |
| figure |

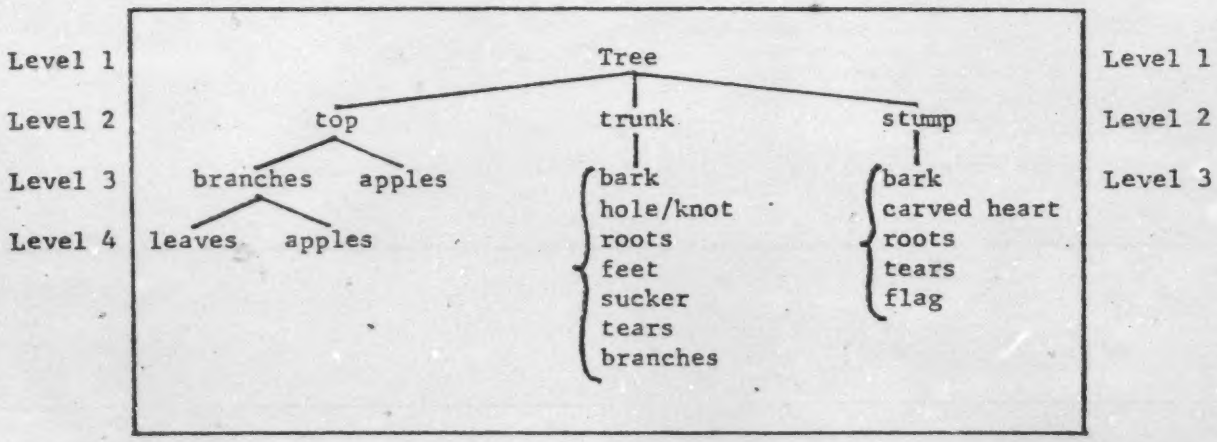
A closer look at each area showed that it could be subdivided, according to the content in the figures.

Table 12.




Even the subdivisions could be subdivided to a multi-level classification system:

Table 13.



As can be seen in Table 13, the classification system solved the problem of "equality of apples"! An apple on a branch had more value than one merely "in the tree."

Step 3. An Evaluation Strategy

This classification system was converted to an evaluation sheet (see Table 14) to assess the complexity of the drawings. Points would be assigned in the following way:

| Item Type | Index |
|---|---|
| Level 1 item | = 1 point each |
| Level 2 item | = 2 points each |
| Level 3 item | = 3 points each |
| Level 4 item | = 4 points each |
| Level 5 item | = 5 points each |

Quantity was not counted. That is, a child received 3 points for a tree branch, or ten tree branches. No points were given for neatness. Excessive realism could be assessed by the imbedded detail in the picture, e.g., an apple with a stem.

Table 14. Evaluation Sheet: Nonverbal Responses

| evel 1<br>1 point) | Level 2<br>(2 points) | Level 3<br>(3 points) | Level 4<br>(4 points) | Level 5<br>(5 points) |
|---|---|---|---|---|
| | *tree top | *branches | leaves | |
| | | 0 | apples | leaves |
| | | | | stem |
| | | apples | leaves | |
| | | | stem | |
| | | 0*leaves | | |
| tree | *trunk | bark | | |
| | 0 | hole-knot | heart | |
| | | *carved heart | | |
| | | roots | | |
| | | feet | | |
| | | sucker | | |
| | | tears | | |
| | | branches | leaves | |
| | | | apples | |
| | | face | eyes | tears |
| | | | mouth | |
| | *stump | flag-pole-banner | pole | |
| | 0 | | banner | stripes |
| | | bark | | |
| | | *carved heart | | |
| | | roots | | |
| | | tears | | |
| | | flag | | |
| | | hole | | |
| | | *ax | *blade | |
| | | | *handle | |
| | background | clouds | | |
| | clouds | | | |
| sky | sun | face | eyes | glasses |
| | | | nose | |
| | | | mouth | |
| | | rays | | |
| | birds | | | |
| | 0*apples | *stems | | |
| | *grass | blades | | |
| ground | flowers | leaves | | |
| | | stem | | |
| | | blossom | | |
| | dirt | hill | | |
| | rock | | | |
| | *apples | stem | | |
| | boat | outside | | |
| | | inside | | |
| | *head | *face | *eyes | |
| | | | *nose | |
| | | | *mouth | |
| figure | | | *ears | |

| evel 1<br>1 point) | Level 2<br>(2 points) | Level 3<br>(3 points) | Level 4<br>(4 points) | Level 5<br>(5 points) |
|---|---|---|---|---|
| figure | apple | | | |
| | | *hair | | |
| continued) | *body | *neck | | |
| | | *chest | *clothing | |
| | *arms | *hands | *fingers | |
| | | ax | handle | |
| | *legs | *feet | *shoes | |
| | | *clothing | | |
| boat | frame | outboard | frame<br>controls | |
| house | | door | | |
| | | | frame | |
| | frame | window | shutter | |
| | roof | | | |
| ladder | rungs | | | |
| 1 = | N<br>X2 = | N<br>X3 = | N<br>X4 = | N<br>X5 = |

Items pictures in the text.
Items mentioned in the text.

Step 4. Scoring the Pictures

Two scores were assigned to each of the five columns (level)--an unweighted score (the number of items in that column) and a weighted score (the number of items x the index). A total score was derived by adding the weighted scores. One third-grade student's scores resembled this:

| Column | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Unweighted | 2 | 3 | 2 | 1 | 0 |
| Weighted | 2 | 6 | 6 | 4 | 0 |

Total Score = 18

In effect, a drawing scored 18 could be said to be less complex than a drawing scored 65. Table 15 presents the mean complexity scores, weighted and unweighted, by grade level.

Table 15. $\bar{X}$ Value Scores/Grade Level

| | K(n=15) | 1(n=10) | 2(n=17) | 3(n=15) |
|---|---|---|---|---|
| Total $\bar{X}$ | 22.4 | 25.8 | 31.5 | 51.3 |
| Level 1 $\bar{X}$ | | | | |
| Weighted | 1.9 | 2.0 | 2.9 | 3.3 |
| Unweighted | 1.9 | 2.0 | 2.9 | 3.3 |
| Level 2 $\bar{X}$ | | | | |
| Weighted | 7.2 | 8.4 | 10.1 | 12.4 |
| Unweighted | 3.6 | 4.2 | 5.1 | 6.2 |
| Level 3 $\bar{X}$ | | | | |
| Weighted | 6.6 | 8.1 | 12.9 | 19.2 |
| Unweighted | 2.2 | 2.7 | 4.3 | 6.4 |
| Level 4 $\bar{X}$ | | | | |
| Weighted | 6.7 | 6.0 | 5.9 | 15.7 |
| Unweighted | 1.7 | 1.5 | 1.5 | 3.9 |
| Level 5 $\bar{X}$ | | | | |
| Weighted | 0.0 | 0.0 | 0.0 | 1.0 |
| Unweighted | 0.0 | 0.0 | 0.0 | 0.2 |

Step 5. Determining Intensity

Merely arriving at complexity scores by grade level provides limited information--only that third graders draw more complex pictures than do kindergarteners. However, insight into response patterns might be achieved if we determine where each student penetrated the farthest level: e.g., eyelashes on a figure standing next to a relative abstracted tree might indicate what aspect of the story the child was focusing on. Table 16 indicates in which general area (i.e., tree, sky, ground) the child became most specific; the number (i.e., 2, 3, 4, 5) indicates the level of penetration. If a child penetrated to a given level in more than one category, numbers were placed in each category with horizontal lines connecting them.

Table 16. Distribution of Highest Penetration

(Intensity) by General Area

| | Tree | Sky | Ground | Figure | Boat | House | Ladder |
|---|---|---|---|---|---|---|---|
| K | 3344 4<br>2443 4<br>444 | | | 4 4<br>4 4 | | 4 | |
| 1 | 34 4<br>543<br>3 | 3 | | 4 444 | | | |
| 2 | 3 3<br>3 3<br>3<br>3<br>4<br>3 | 3<br>3 | 3<br>3<br>3 | 3 4<br>4<br>4<br>4<br>4<br>4<br>4<br>4<br>4 4 | | | |
| 3 | 4 4<br>5 5<br>5 5 4<br>4<br>4<br>3 | 3 | 3 | 4<br>4 4<br>4 4<br>4 4<br>3 | 4 | | |
| UNW | 39 | 4 | 4 | 27 | 1 | 1 | 0 |
| W | 145 | 12 | 12 | 106 | 4 | 4 | 0 |
| X | 3.7 | 3 | 3 | 3.9 | 4 | 4 | 0 |

In examining the data in Table 16, one sees that areas the tree and the figure were the most intensely drawn. Although a higher number of children drew the tree with greater intensity than the figure (UNW-39 as opposed to UNW-27), the overall average intensity of the tree was slightly lower (3.7 as opposed to 3.9). Yet, all level 5 entries occur in the general area of the tree.

With respect to questions 3 - 5 posed at the outset of the study:

3. What settings did students "borrow" from the book's illustrations?
   (a) Tree settings and boy settings were most frequently borrowed.
   (b) The only object borrowed from the sky setting was falling apples. No students "borrowed" falling apple cores or falling leaves.
4. What settings did students "borrow" from the text?
   (a) Tree and boy settings were borrowed from the text, although these same settings were borrowed from the illustrations.
   (b) Boats and houses, not illustrated but mentioned in the text occurred in a few instances.
5. What settings did students use independently?
   (a) Students drew apples in the tree.
   (b) Students added details to the tree trunk: bark, knot-holes, roots, face, tears, branches.

(c) Students added details to the stump: bark, roots, tears, a flag.

(d) Students tended to embelish the sky area: clouds, sun, sun with rays, sun with face.

(e) Students tended to embelish the ground area; flowers, dirt, rocks, hills.

What these results suggest is that there was a tendency to go beyond the detail given in illustration and text and a lesser tendency to ascribe human physical and emotional characteristics to the tree and the sun.

## Grade Level Responses

Throughout this paper, the authors have reported data by grade level but have refrained from making generalized statements about grade levels, principally because the children were not equal groups and were not randomly sampled from a pre-defined population. However, one might make some extremely tentative conclusions about grade level response.

..First, with respect to color choice, there was a tendency for younger children to choose green, brown, and red and combinations thereof. This tendency diminished sharply by grade 3, as children tended to use more color patterns.

..Second, uses of color tended to increase with the grade level, suggesting that older children found other uses of green-brown-red than the typical top-trunk-apple use.

..Third, whereas younger children tended to color the tree realistically, older children tended to color the sky and figure more realistically.

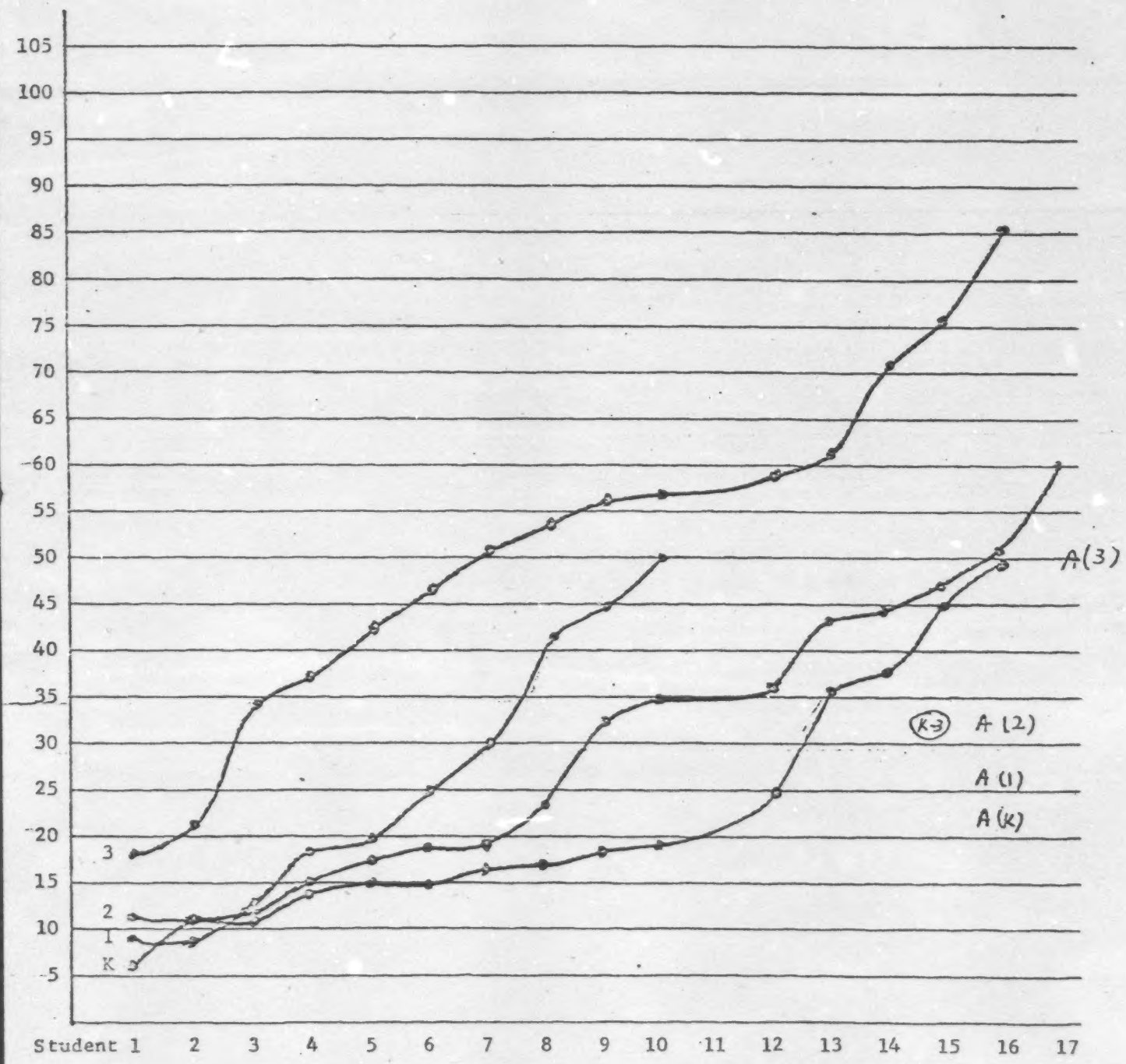
..Fourth, the complexity of drawings tended to increase with the grade level, although Table 17 suggests that certain kindergarteners drew as complex pictures as many third graders.

..Fifth, the intensity of the drawings at all grade levels was greatest when the tree was being drawn, although there was a tendency for older children to intensity the figure as well as the tree.

..Sixth, older children tend to draw independently from a book's illustrations and textual passages.

Table 17. Curve of Distribution of

Value Scores by Grade Level




0 = Population mean.

A = Grade level mean.

## Conclusions

Primary school children, unlike older students, find it difficult to respond verbally to literature. As a result, an investigator might use nonverbal behavior, specifically drawings, as a mode of student response. The colors a student uses and his subsequent attempts to draw and color certain portions of a picture realistically and intensively may suggest which elements of a story the student feels are most important. In responding to The Giving Tree, younger children tended to respond more to the tree than to the young man; whereas, older children tended to focus on the young man and his behavior. Inferences drawn, cautiously, from student behavior suggest that younger children respond differently to The Giving Tree than do older children who tend to feel the story is more of an account of man's inhumanity to himself than man's inhumanity to the tree. Perhaps, maturity makes that type of response possible.

## Implications for Teaching

Children's drawings can give a teacher insights into how they respond to literature. If pictures are drawn immediately after a story-telling session, they might become a basis for discussion and/or writing. If, for instance, a teacher notices that a child has drawn one area of a picture with greater intensity than the others, questioning the student might evoke intriguing verbal responses to the story. As for writing, a child might be asked to develop a "story" about that area of a picture that he drew with greatest intensity.

## Suggestions for Further Research

More study is needed in this area, particularly controlled, empirical studies based on the tentative conclusions of this content analysis to determine if children respond to certain aspects of a book by coloring with realism and drawing with intensity; and if response changes is a function of age, maturity, and grade level. Another study using The Giving Tree but without revealing the illustrations might indicate different patterns of "borrowing" and "independence."

REFERENCES

Barcus, Earle F. Education in content analysis. Paper delivered at a National Conference on Content Analysis. University of Pennsylvania, Philadelphia, Nov. 16-18, 1967.

Cooper, Charles and Alan Purves. A guide to evaluation. Boston: Ginn and Co., 1973.

Dixon, John. Growth through English. Reading: NATE, 1966.

Good, Carter V. Introduction to educational research. New York: Appleton-Century-Crofts, 1963, pp. 327-36.

Lid, Richard and Philip Handler. A Practical Project in Responding to Literature (a film series). Washington: USOE, 1974.

Loban, Walter. Literature and social sensitivity. Champaign: NCTE, 1954.

Moffett, James. A student-centered language arts curriculum, grades K-12: a handbook for teachers. New York: Houghton Mifflin, 1968.

Pool, Ithiel de Sola. The prestige press: a comparative study of political symbols. Cambridge: The MIT Press, 1970, pp. 24-33.

Purves, Alan. How porcupines make love. Boston: Ginn, 1973.

Purves, Alan C. and Richard Beach. Literature and the reader. Urbana: NCTE, 1972, pp. 1-60.

Purves, Alan C. and Victoria Rippere. Elements of writing about a literary work: a study of response to literature. Urbana: NCTE, 1968.

Squire, James B. Responses of adolescents to literature. Ph.D. Dissertation. Berkeley, 1956.